

850nm 1310nm 1550nm Polarization Maintaining Fiber for Gyro coil



FOGPhotonics,inc
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Products Guide

FOG Components

IMU Systems

FOG Devices

RLG Devices

FOG Instruments

Features

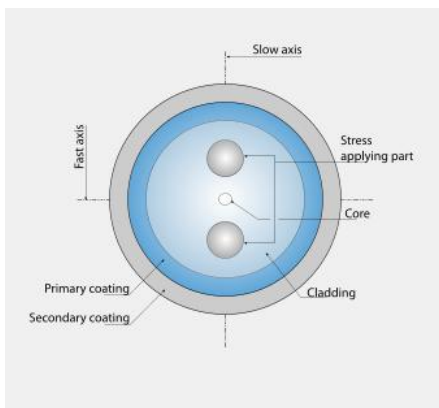
- Short beat length
- Extremely high birefringence
- Excellent PM properties
- Tight geometric tolerances and low attenuation
- Low bending-induced attenuation
- Dual-layer, and UV-Acrylate coating
- High environmental stability and reliability

Application

- Fibre Optic Gyroscopes
- PM fused-fibre couplers
- Polarization-sensitive components
- High performance transmission laser pigtails
- Polarization-based sensors

2016 NEW VERSION

Description



FOGPhotonics's PANDA-type polarization maintaining (PM) fiber design uses two stress applying parts to create high birefringence, resulting in fibers with excellent polarization maintaining properties. FOGPhotonics's PM fibers have high birefringence and exceptionally tight dimensional specifications, critical for manufacturing high precision high-performance gyro-coils. The Panda-type configuration is preferred over bow-tie or elliptical clad designs because of its advantages in process scalability and product uniformity. These fibers are available for operation at 850, 1300 and 1550 nm wavelengths

Specification

Fiber Type	Operating Wavelength (nominal)	Cut-off wavelength (nm)	Mode Field Diameter (μm)	Attenuation (dB/km)	Beat Length (mm)	Typical Cross Talk at 4m (dB)	Cross Talk at 100m (dB)
FOGPM850/125-12/250	850	700~780	4.5 ± 1	≤2.5	≤3.0	≤-40	≤-30
FOGPM850/80-12/165							
FOGPM1310/125-16/250	1310	1100~1290	9.0 ± 1	≤0.5	≤4.0	≤-40	≤-30
FOGPM1310/80-16/165							
FOGPM1550/125-18/250	1550	1290~1520	10.5 ± 1	≤0.5	≤5.0	≤-40	≤-30
FOGPM1550/80-18/165							

Geometric Properties

Fiber Type	Serial NO.	Cladding Diameter (μm)	Coating Diameter (μm)	cladding non-circularity (%)	Core/Cladding Offset (μm)	Numerical Aperture
FOGPM850/125-12/250	FOGPM8512-A	125 ± 1	245 ± 7	≤1.0	≤1.0	0.15
FOGPM850/80-12/165	FOGPM8512-B	80 ± 1	170 ± 5	≤1.0	≤1.0	0.15
FOGPM1310/125-16/250	FOGPM1316-A	125 ± 1	245 ± 7	≤1.0	≤1.0	0.14
FOGPM1310/180-16/165	FOGPM1316-B	80 ± 1	170 ± 5	≤1.0	≤1.0	0.14
FOGPM1550/125-18/250	FOGPM1517-A	125 ± 1	245 ± 7	≤1.0	≤1.0	0.13
FOGPM1550/80-18/165	FOGPM1517-B	80 ± 1	170 ± 5	≤1.0	≤1.0	0.13

Customized PMFs are available with different application designs.

Environmental and Mechanical

Parameters	Unit	Value
Operating Temperature Range (°C)	°C	-45 to +85
*Proof Test Level (kpsi)	GN/m ²	0.70 GN/m ² (100 kpsi)
Polarization crosstalk(h-Parameter)	m ⁻¹	<10-5 /m
Stress type		PANDA

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